

Title (en)
SEALING MULTIPLE SURGICAL INSTRUMENTS

Title (de)
DICHTUNG FÜR MEHRERE CHIRURGISCHE INSTRUMENTE

Title (fr)
SCELLAGE DE PLUSIEURS INSTRUMENTS CHIRURGICAUX

Publication
EP 3520853 A1 20190807 (EN)

Application
EP 19165014 A 20140314

Priority

- US 201361800632 P 20130315
- US 201361801081 P 20130315
- US 201361801408 P 20130315
- US 201361801728 P 20130315
- US 201361801995 P 20130315
- EP 14765569 A 20140314
- US 2014029321 W 20140314

Abstract (en)
A multi-instrument sealing mechanism is provided. The multi-instrument sealing mechanism includes a cannula seal, a cannula cap, an instrument guide (504, 506), an instrument seal (520), and door mechanisms (510) in the instrument guide. The cannula seal can include a cross-slit seal. The cannula cap can capture the cannula seal between the instrument guide and the cannula. A door mechanism and instrument seal can be housed in the instrument guide.

IPC 8 full level
A61M 39/06 (2006.01); **A61B 17/34** (2006.01); **A61B 90/00** (2016.01); **A61M 25/04** (2006.01)

CPC (source: EP KR)
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Citation (applicant)

- US 85545210 A 20100812
- US 2011282358 A1 20111117 - GOMEZ DANIEL H [US], et al

Citation (search report)

- [Y] EP 2467074 A2 20120627 - INTUITIVE SURGICAL OPERATIONS [US]
- [Y] KR 101064695 B1 20110914 - LEE JEONG SAM [KR]
- [A] US 6018094 A 20000125 - FOX WILLIAM CASEY [US]
- [A] US 6458077 B1 20021001 - BOEBEL MANFRED [DE], et al

Designated contracting state (EPC)
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WO 2014144771 A1 20140918; CN 105209106 A 20151230; CN 105209106 B 20200320; CN 111248981 A 20200609; CN 111248981 B 20231027; CN 117426840 A 20240123; EP 2996757 A1 20160323; EP 2996757 A4 20170215; EP 2996757 B1 20190508; EP 3520853 A1 20190807; EP 3520853 B1 20230809; EP 4238605 A2 20230906; EP 4238605 A3 20231018; JP 2016517330 A 20160616; JP 2019063562 A 20190425; JP 2021006265 A 20210121; JP 2021191542 A 20211216; JP 6755791 B2 20200916; JP 6793710 B2 20201202; JP 6950061 B2 20211013; JP 7068536 B2 20220516; KR 102396090 B1 20220510; KR 102419802 B1 20220712; KR 102465136 B1 20221110; KR 102597833 B1 20231106; KR 20150125668 A 20151109; KR 20210093366 A 20210727; KR 20220104060 A 20220725; KR 20220153119 A 20221117

DOCDB simple family (application)
US 2014029321 W 20140314; CN 201480015867 A 20140314; CN 202010114220 A 20140314; CN 202311303018 A 20140314; EP 14765569 A 20140314; EP 19165014 A 20140314; EP 23183572 A 20140314; JP 2016503060 A 20140314; JP 2018232342 A 20181212; JP 2020159099 A 20200923; JP 2021154075 A 20210922; KR 20157024904 A 20140314; KR 20217022338 A 20140314; KR 20227023327 A 20140314; KR 20227038733 A 20140314